Applied Radiation and Isotopes

Volume 57, 2002

List of Contents, Author, and Subject Indexes

PERGAMON

PII: S0969-8043(03)00104-0

APPLIED RADIATION AND ISOTOPES

EDITORS-IN-CHIEF

B. M. COURSEY
Ionizing Radiation Division, Building 245, C229, RADP, National Institute of Standards and Technology, 100 Bureau Drive, Gaithersburg, MD 20899-8460, U.S.A.
Fax: +1 301 869 7682
E-mail: pamela.hodge@nist.gov

D. M. TAYLOR
Cardiff University, Department of Chemistry, c/o 17 Pant Poeth, Bridgend CF31 5BD Wales, U.K.
Fax: +44 1656 647 911
E-mail: davtay@globalnet.co.uk

EDITORS

J. CSIKAI, *Institute of Experimental Physics, University of Debrecen, Pf. 81, 4010 Debrecen, Hungary. E-mail: csikai@delfin.klte.hu*

J. J. M. DE GOEIJ, *Delft University of Technology, Interfaculty Reactor Institute, Mekelweg 15, 2629 JB Delft, The Netherlands. E-mail: j.j.m.deGoeij@IRI.TUDelft.nl*

S. JUDGE, *Centre for Ionising Radiation Metrology, National Physical Laboratory, Queens Road, Teddington, Middlesex, TW11OLW, UK. E-mail steven.judge@npl.co.uk*

F. F. KNAPP, *Nuclear Medicine Program, Nuclear Science and Technology Division, Mail Stop 6229, Building 4501, Oak Ridge National Laboratory, P.O. Box 2008, Oak Ridge, TN 37831-6229, U.S.A. E-mail: jkp@ornl.gov*

A. KUDO, *Research Reactor Institute, University of Kyoto, Kyoto, Japan, E-mail: kudo@rri.kyoto-u.ac.jp*

P. MITCHELL, *Department of Experimental Physics, National University of Ireland, Dublin (NUID), Belfield, Dublin 4, Republic of Ireland. E-mail: peter.mitchell@ucd.ie*

V. NAGY, *Ionizing Radiation Division, Building 245, C229, RADP, National Institute of Standards and Technology, 100 Bureau Drive, Gaithersburg, MD 20899-8460, U.S.A. E-mail: Vitaly_Nagy@hotmail.com*

V. W. PIKE, *Molecular Imaging Branch, National Institute of Mental Health, Building 1, Room B3-10, 1 Center Drive, Bethesda, MD 20892-0135, U.S.A. E-mail: victor.pike@nih.gov*

M. RIVARD, *Department of Radiation Oncology, Tufts New England Medical Center, Tufts University School of Medicine, 750 Washington Street, #246, Boston, MA 02111, U.S.A. E-mail: mrivard@lifespan.org*

R. SCHNEIDER, *Mail Stop 8, Geology and Geophysics Department, Woods Hole Oceanographic Institution, Woods Hole, MA 02543-1539, U.S.A. E-mail: rschneider@whoi.edu*

J. S. SCHWEITZER, *41 Silver Hill Road, Ridgefield, CT 06877, U.S.A. E-mail: schweitz@phys.uconn.edu*

B. SOWERBY, *Program Manager, Process, Design & Optimisation, CSIRO Minerals, PMB5, Menai, NSW 2234, Australia, E-mail: brian.sowerby@minerals.csiro.au*

T. TOMINAGA, *Department of Chemistry, Faculty of Science, University of Tokyo, Bunkyo-ku, Tokyo, Japan*

L. I. WIEBE, *Faculty of Pharmacy and Pharmaceutical Sciences, 3118 Pharmacy Center, University of Alberta, Edmonton, Canada T6G 2N8. E-mail: leonard.wiebe@ualberta.ca*

© 2003 Elsevier Science Ltd. All rights reserved.

Author enquiries

For enquiries relating to the submission of articles (including electronic submission where available) please visit the Author Gateway from Elsevier Science at http://authors.elsevier.com. The Author Gateway also provides the facility to track accepted articles and set up e-mail alerts to inform you of when an article's status has changed, as well as detailed artwork guidelines, copyright information, frequently asked questions and more.

Contact details for questions arising after acceptance of an articles, especially those relating to proofs, are provided after registration of an article for publication.

Frequency: Published monthly in 2 volumes of 6 issues

Publication information: Applied Radiation and Isotopes (ISSN 0969-8043). For 2003, volumes 58–59 are scheduled for publication. Subscription prices are available upon request from the Publisher or from the Regional Sales Office nearest you or from this journal's website (http://www.elsevier.com/locate/apradiso). Further information is available on this journal and other Elsevier Science products through Elsevier's website: (http://www.elsevier.com). Subscriptions are accepted on a prepaid basis only and are entered on a calendar year basis. Issues are sent by standard mail (surface within Europe, air delivery outside Europe). Priority rates are available upon request. Claims for missing issues should be made within six months of the date of dispatch.

Orders, claims, and product enquiries: please contact the Customer Support Department at the Regional Sales Office nearest you:
New York: Elsevier Science, PO Box 945, New York, NY 10159-0945, USA; phone: (+1) (212) 633 3730 [toll free number for North American customers: 1-888-4ES-INFO (437-4636)]; fax: (+1) (212) 633 3680; e-mail: usinfo-f@elsevier.com
Amsterdam: Elsevier Science, PO Box 211, 1000 AE Amsterdam, The Netherlands; phone: (+31) 20 4853757; fax: (+31) 20 4853432; e-mail: nlinfo-f@elsevier.com
Tokyo: Elsevier Science, 9-15 Higashi-Azabu 1-chome, Minato-ku, Tokyo 106-0044, Japan; phone: (+81) (3) 5561 5033; fax: (+81) (3) 5561 5047; e-mail: info@elsevier.co.jp
Singapore: Elsevier Science, 3 Killiney Road, #08-01 Winsland House I, Singapore 239519; phone: (+65) 6349-0200; fax: (+65) 6733 1510; e-mail: asianfo@elsevier.com.sg
Rio de Janeiro: Elsevier Science, Rua Sete de Setembro 111/16 Andar, 20050-002 Centro, Rio de Janeiro - RJ, Brazil; phone: (+55) (21) 509 5340; fax: (+55) (21) 507 1991; e-mail: elsevier@campus.com.br [Note (Latin America): for orders, claims and help desk information, please contact the Regional Sales Office in New York as listed above]

USA mailing notice: *Applied Radiation and Isotopes* (ISSN 0969-8043) is published monthly in 2 volumes of 6 issues by Elsevier Science Ltd. (P.O. Box 211, 1000 AE Amsterdam, The Netherlands). Annual subscription price in the USA US$ 2391 (valid in North, Central and South America), including air speed delivery. Periodical postage rate paid at Jamaica, NY 11431.
USA POSTMASTER: Send address changes to *Applied Radiation and Isotopes*, Publications Expediting Inc., 200 Meacham Ave, Elmont, NY 11003.
AIRFREIGHT AND MAILING in the USA by Publications Expediting Inc., 200 Meacham Avenue, Elmont, NY 11003.

CONTENTS OF VOLUME 57

Number 1

Radiochemistry and Radionuclide Applications

G.L. Silver 1 Acidity changes and balanced equations for plutonium disproportionation reactions

S. Chattopadhyay, M.K. Das, S.K. Sarkar, P. Saraswathy and N. Ramamoorthy 7 A novel ^{99m}Tc delivery system using $(n,\gamma)^{99}$Mo adsorbed on a large alumina column in tandem with Dowex-1 and AgCl columns

Radiation Sources and Applications

Sung-Yen Lin, Tieh-Chi Chu, Jao-Perng Lin and Mu-Tai Liu 17 The effect of a metal hip prosthesis on the radiation dose in therapeutic photon beam irradiations

D.K. Mohapatra and P. Mohanakrishnan 25 Measurement and prediction of neutron spectra in the Kalpakkam mini reactor (KAMINI)

Synthesis of Labelled Compounds

J.J. Hwang, M.H. Liao, T.C. Yen, S.P. Wey, K.J. Lin, W.H.T. Pan, J.C. Chen and G. Ting 35 Biodistribution study of [^{99m}Tc] TRODAT-1 alone or combined with other dopaminergic drugs in mice with macroautoradiography

Ken-ichi Nishijima, Yuji Kuge, Eriko Tsukamoto, Koh-ichi Seki, Kazue Ohkura, Yasuhiro Magata, Akira Tanaka, Kotaro Nagatsu and Nagara Tamaki 43 Increased [^{18}F]2-fluoro-2-deoxy-D-glucose ([^{18}F]FDG) yield with recycled target [^{18}O]water: factors affecting the [^{18}F]FDG yield

T. Blum, J. Ermert and H.H. Coenen 51 No-carrier-added (n.c.a.) synthesis of asymmetric [^{73,75}Se]selenoethers with isonitriles

Radioactivity and Radiation Measurements

Mehmet Ertugrul 57 Measurement of L_3 subshell fluorescence yields of some elements in the atomic range $57 \leqslant Z \leqslant 68$ using photoionisation

Mehmet Ertugrul 63 Measurement of Coster–Kronig vacancy transfer factor for L_3 subshell X-rays of Au, Hg, Pb, Tl, Bi, Th and U at 59.5 keV

A. Likar and T. Vidmar 67 Analysis of gamma-ray spectra from HPGe detectors in field conditions without explicit energy calibration

E.R. van der Graaf and R.J. de Meijer 73 Gamma-ray spectrometry intra- and interlaboratory test of the Dutch protocol

J.V. Bandeira, C.S. Sabino, P.E. Aun, V.L. Mendes and E. Garcia Agudo 85 Development of a technique for using ^{99m}Tc as an adsorbable tracer for hydrodynamic studies of fine sediments in suspension

Anand Raman, Issac K. Oommen, T.K. Gundu Rao and D.N. Sharma 93 Lyoluminescence and ESR correlation studies of trehalose dihydrate

Nuclear Geophysics

M. Brai, S. Basile, S. Bellia, S. Hauser, P. Puccio, S. Rizzo, A. Bartolotta and A. Licciardello 99 Environmental radioactivity at Stromboli (Aeolian Islands)

V. Kannan, M.P. Rajan, M.A.R. Iyengar and R. Ramesh 109 Distribution of natural and anthropogenic radionuclides in soil and beach sand samples of Kalpakkam (India) using hyper pure germanium (HPGe) gamma ray spectrometry

Mohamed A. El-Sadek 121 Application of thorium-normalized airborne radio-spectrometric survey data of Wadi Araba area, North-eastern Desert, Egypt, as a guide to the recognition of probable subsurface petroleum accumulations

Technical note
A. El-Shershaby 131 Study of radioactivity levels in granite of Gable Gattar II in the north eastern desert of Egypt

Events 137

Volume Contents III

Author index to volume 55 XI

Subject index to volume 55 XV

Number 2

Radiochemistry and Radionuclide Applications

Ning Liu, Yuanyou Yang, Shunzhong Luo, Taiming Zhang, Jiannan Jin, Jiali Liao and Xifeng Hua 139 Biosorption of ^{241}Am by *Rhizopus arrihizus*: preliminary investigation and evaluation

Lan Zhang, Ganghua Tang, Duanzhi Yin, Xiaolan Tang and Yongxian Wang 145 Enantioselective synthesis of no-carrier-added (NCA) 6-[^{18}F]fluoro-L-DOPA

Kerstin Fredlund, Lena Rossander-Hulthén, Mats Isaksson, Annette Almgren and Ann-Sofie Sandberg 153 Extrinsic labelling of zinc and calcium in bread

Paul W. Jones, David M. Taylor, Louise M. Webb and David R. Williams 159 Computer modelling of the chemical speciation of caesium, uranium (VI) and neptunium(V) in human duodenal fluids under fasting conditions

Radiation Sources and Applications

Héctor René Vega-Carrillo, Eduardo Manzanares-Acuña, Ana María Becerra-Ferreiro and Aureliano Carrillo-Nuñez 167 Neutron and gamma-ray spectra of ^{239}PuBe and ^{241}AmBe

B. Leprince and J. de Sanoit 171 A new design of ^{238}Pu activity sources for use in intercomparison exercises

Synthesis of Labelled Compounds

Tapas Das, Sudipta Chakraborty, P.R. Unni, Sharmila Banerjee, Grace Samuel, H.D. Sarma, Meera Venkatesh and M.R.A. Pillai 177 ^{177}Lu-labeled cyclic polyaminophosphonates as potential agents for bone pain palliation

E. Hess, S. Sichler, A. Kluge and H.H. Coenen 185 Synthesis of 2-[^{18}F]fluoro-L-tyrosine via regiospecific fluoro-destannylation

Seung Jun Oh, Jin-Sook Ryu, Joong Woo Shin, Eun Jin Yoon, Hyun-Joon Ha, Joon Hong Cheon and Hee Kyung Lee 193 Synthesis of ^{99m}Tc-ciprofloxacin by different methods and its biodistribution

D.P. Sobczyk, J. van Grondelle, A.M. de Jong, M.J.A. de Voigt and R.A. van Santen 201 Production of chemically pure gaseous [^{13}N]NH_3 pulses for PEP studies using a modified DeVarda reduction

Radioactivity and Radiation Measurements

Lino Miramonti 209 A very low background HPGe detector operating deep underground at 4800 m water equivalent

T.M. Semkow, P.P. Parekh, C.D. Schwenker, A.J. Khan, A. Bari, J.F. Colaresi, O.K. Tench, G. David and W. Guryn 213 Low-background gamma spectrometry for environmental radioactivity

N. Keutgen, S. Matsuhashi, C. Mizuniwa, T. Ito, T. Fujimura, N.S. Ishioka, S. Watanabe, T. Sekine, H. Uchida and S. Hashimoto 225 Transfer function analysis of positron-emitting tracer imaging system (PETIS) data

Svetlana Nour, William C. Burnett and E. Philip Horwitz 235 ^{234}Th analysis of marine sediments via extraction chromatography and liquid scintillation counting

Scott D. Webb, Richard C. Page, Michael Jay and Paul M. Bummer 243 Characterization and validation of the gamma-scintigraphic method for determining liquid holdup in foam

M.H. Lee, K.H. Chung, G.K. Choi and C.W. Lee 257 Measurement of ^{90}Sr in aqueous samples using liquid scintillation counting with full spectrum DPM method

E.H.K. Akaho and B.J.B. Nyarko 265 Characterization of neutron flux spectra in irradiation sites of MNSR reactor using the Westcott-formalism for the k_0 neutron activation analysis method

Technical note

D. Nikezić and A. Janićijević 275 Bulk etching rate of LR115 detectors

Nuclear Geophysics

K.N. Yu, Z.L.L. Yeung, L.Y.L. Lee, M.J. Stokes and R.C.W. Kwok 279 Determination of multi-element profiles of soil using energy dispersive X-ray fluorescence (EDXRF)

M.A. Misdaq 285 Use of three new SSNTD methods for evaluating thorium contents in different building materials and measuring thoron and its progeny concentrations inside dwellings

Erratum 291

Events 293

Number 3

Radiochemistry and Radionuclide Applications

Sudipta Chakraborty, P.R. Unni, Meera Venkatesh and M.R.A. Pillai 295 Feasibility study for production of ^{175}Yb: a promising therapeutic radionuclide

Marc S. Berridge, Ken W. Voelker and Bonnie Bennington 303 High-yield, low-pressure [^{18}O] water targets of titanium and niobium for F-18 production on MC-17 cyclotrons

Chunfu Zhang, Yongxian Wang, Haibin Tian and Duanzhi Yin 309 Preparation of ^{103}Pd seed–molecular plating of ^{103}Pd onto silver rod

Usha Pandey, Archana Mukherjee, H.D. Sarma, Tapas Das, M.R.A. Pillai and Meera Venkatesh 313 Evaluation of ^{90}Y-DTPA and ^{90}Y-DOTA for potential application in intra-vascular radionuclide therapy

Radiation Sources and Applications

H.J. Pant and V.N. Yelgoankar 319 Radiotracer investigations in aniline production reactors

Keith T. Sowards and Ali S. Meigooni 327 A Monte Carlo evaluation of the dosimetric characteristics of the Best® Model 2301 ^{125}I brachytherapy source

Synthesis of Labelled Compounds

Ming-Rong Zhang, Akio Tsuchiyama, Terushi Haradahira, Yuichiro Yoshida, Kenji Furutsuka and Kazutoshi Suzuki 335 Development of an automated system for synthesizing ^{18}F-labeled compounds using [^{18}F]fluoroethyl bromide as a synthetic precursor

Judith A. Egan, Anne G. Laseter and Crist N. Filer 343 Tritium labelling and characterization of the antimalarial drug (+/−)-chloroquine by several methods

Ren Iwata, Claudio Pascali, Anna Bogni, Shozo Furumoto, Kazunori Terasaki and Kazuhiko Yanai 347 [^{18}F]Fluoromethyl triflate, a novel and reactive [^{18}F]fluoromethylating agent: preparation and application to the on-column preparation of [^{18}F]fluorocholine

Radioactivity and Radiation Measurements

Liu Wenzhong, Kong Li, Qu Tan and Cheng Jingjing 353 An evaluation of measurement uncertainties in the on-line measurement of coal ash content by gamma-ray transmission

C. Mathew, M.A. Majali and S.A. Balakrishnan 359 A novel approach for the adsorption of iodine-125 on silver wire as matrix for brachytherapy source for the treatment of eye and prostate cancer

T.T. Tominaga, F.A.M. Cássaro, K. Reichardt, O.O.S. Bacchi, J.C.M. Oliveira and L.C. Timm 369 On the use of surface neutron-gamma gauges to estimate soil water content

Luiz F. Pires, Jose R. de Macedo, Manoel D. de Souza, Osny O.S. Bacchi and Klaus Reichardt 375 Gamma-ray computed tomography to characterize soil surface sealing

Mark J. Rivard 381 Comprehensive Monte Carlo calculations of AAPM Task Group Report No. 43 dosimetry parameters for the Model 3500 I-Plant ^{125}I brachytherapy source

R.N. Acharya, A.G.C. Nair, A.V.R. Reddy and S.B. Manohar 391 Validation of a neutron activation analysis method using k_0-standardization

Li Yan, Shen Shuifa, Shi Shuanghui, Gu Jiahui, Yu Xiaohan, Liu Jingyi and Zeng Jiping 399 A decay study of ^{70}As

Maria Inês Teixeira and Linda V.E. Caldas 407 Dosimetric properties of various colored commercial glasses

M. Korun 415 Propagation of the uncertainties of sample position to the uncertainty of the counting efficiency in gamma-ray spectrometry

A. Sroor, S.Y. Afifi, A.S. Abdel-Haleem, A.B. Salman and M. Abdel-Sammad 427 Environmental pollutant isotope measurements and natural radioactivity assessment for North Tushki area, south western desert, Egypt

D.V. Filossofov, A.F. Novgorodov, N.A. Korolev, V.G. Egorov, N.A. Lebedev, Z.Z. Akselrod, J. Brockmann and F. Rösch 437 Development of a γ–γ-perturbed angular correlation one-detector method (1-PAC) for investigation of physico-chemical properties of matter

Technical note

Renato Yoichi, Ribeiro Kuramoto and Carlos Roberto Appoloni 445 Study of variance and covariance terms in linear attenuation coefficient measurements of irregular samples through the two media method by gamma-ray transmission

Nuclear Geophysics

P.H.G.M. Hendriks, M. Maučec and R.J. de Meijer 449 MCNP modelling of scintillation-detector γ-ray spectra from natural radionuclides

D.M. Taylor 459 Publications received

Events 461

Number 4

Radiochemistry and Radionuclide Applications

E.H. Borai and A.S. Mady	463	Separation and quantification of ^{238}U, ^{232}Th and rare earths in monazite samples by ion chromatography coupled with on-line flow scintillation detector
Kamalika Roy, D.K. Pal, S. Basu, Dalia Nayak and Susanta Lahiri	471	Synthesis of a new ion exchanger, zirconium vanadate, and its application to the separation of barium and cesium radionuclides at tracer levels
A.H. Braker, F.P. Moet, R.E. van der Zwart, J.L.H. Eersels and J.D.M. Herscheid	475	Adsorption of radioiodine on platinum: a fast and simple column method to obtain concentrated and pure radioiodide in either water or anhydrous solvents
Dalia Nayak, Susanta Lahiri and A. Ramaswami	483	Alternative radiochemical heavy ion activation methods for the production and separation of thallium radionuclides

Radiation Sources and Applications

J. Bartoll, H.P. Schwarcz and W.J. Rink	491	ESR of E′ centres in unstrained geological quartz grains
A. Kinoshita, A. Brunetti, W.E.P. Avelar, F.L.M. Mantelatto, M.G. Simões, A. Fransozo and O. Baffa	497	ESR dating of a subfossil shell from Couve Island, Ubatuba, Brazil

Synthesis of Labelled Compounds

Technical notes

Hojatollah Matloubi, Mehdi Ghandi and Nader Saemian	501	Synthesis of a carbon-14 analogue of 8-chloro-11-(4-methyl-1-piperazinyl)-11-[^{14}C]-dibenz[b,f][1,4]oxazepine
T.D. Wegman, B. Maas, P.H. Elsinga and W. Vaalburg	505	An improved method for the preparation of [^{11}C]verapamil

Radioactivity and Radiation Measurements

D. Necsoiu, I.L. Morgan, H. Hupf, W.J. Courtney, J. Kinross-Wright, M.El. Bouanani, J.L. Duggan and F.D. McDaniel	509	Monte Carlo simulations and experimental studies of yttrium-90 production using a 33 MeV linac
Hu-Xia Shi, Bo-Xian Chen, Ti-Zhu Li and Di Yun	517	Precise Monte Carlo simulation of gamma-ray response functions for an NaI(Tl) detector
V.P. Kozheurov, V.I. Zalyapin, N.B. Shagina, E.E. Tokareva, M.O. Degteva, E.I. Tolstykh, L.R. Anspaugh and B.A. Napier	525	Evaluation of uncertainties in ^{90}Sr-body-burdens obtained by whole-body count: application of Bayes' rule to derive detection limits by analysis of a posteriori data
M. Sohrabpour, M. Hassanzadeh, M. Shahriari and M. Sharifzadeh	537	Gamma irradiator dose mapping simulation using the MCNP code and benchmarking with dosimetry
Umesh Kumar and G.S. Ramakrishna	543	A mixed approach to artifacts minimization in a continuous-rotate X-ray based tomographic imaging system using linear detector array
T.M. Abd El-Maksoud	557	The characteristics of a wire–plane corona streamer detector when an α-particle source is moved in a plane parallel to the cathode
Aysun Uğur, Güngör Yener and Asiye Başsarí	565	Trace metals and ^{210}Po (^{210}Pb) concentrations in mussels (*Mytilus galloprovincialis*) consumed at western Anatolia
P.P. Ember, T. Belgya, J.L. Weil and G.L. Molnár	573	Coincidence measurement setup for PGAA and nuclear structure studies

Nuclear Geophysics

A. Navas, J. Soto and J. Machín	579	^{238}U, ^{226}Ra, ^{210}Pb, ^{232}Th and ^{40}K activities in soil profiles of the Flysch sector (Central Spanish Pyrenees)
L.H. Mancini and D.M. Bonotto	591	A method for evaluating ^{228}Ra in environmental matrices and its use at Poços de Caldas plateau, Brazil
Events	601	

Number 5

A Special Issue dedicated to the memory of Richard M. Lambrecht 1943–2001

Editors:
Leonard I. Wiebe and David M. Taylor

Editorial **David M. Taylor**	603	A remarkable contribution
Joanna S. Fowler	605	Richard M. Lambrecht
Munawwar Sajjad, Mehran R. Zaini, Jeih-San Liow, David A. Rottenberg and Stephen C. Strother	607	Production and dosimetry of [^{14}O]water for PET activation studies
Mauro Bonardi, Claudio Birattari, Flavia Groppi and Enrico Sabbioni	617	Thin-target excitation functions, cross-sections and optimised thick-target yields for ^{nat}Mo(p,*x*n)$^{94g,95m,95g,96(m+g)}$Tc nuclear reactions induced by protons from threshold up to 44 MeV. No Carrier Added radiochemical separation and quality control
S. Mirzadeh, F.Y. Lambrecht and R.M. Lambrecht	637	Decay of tungsten-189
M.Š. Dadachov, Le Van So, R.M. Lambrecht and E. Dadachova	641	Development of a titanium tungstate-based ^{188}W/^{188}Re gel generator using tungsten of natural isotopic abundance
Mauro Bonardi, Flavia Groppi and Claudio Birattari	647	A rapid improved method for gamma-spectrometric determination of ^{202}Tl impurities in [^{201}Tl]-labelled radiopharmaceuticals
M. Neves, A. Kling and R.M. Lambrecht	657	Radionuclide production for therapeutic radiopharmaceuticals
M. Fani, S. Vranjes, S.C. Archimandritis, S. Potamianos, S. Xanthopoulos, P. Bouziotis and A.D. Varvarigou	665	Labeling of monoclonal antibodies with ^{153}Sm for potential use in radioimmunotherapy
Mario Matarrese, Francesco Sudati, Dmitri Soloviev, Sergio Todde, Elia Anna Turolla, Marzia Galli Kienle and Ferruccio Fazio	675	Automation of [^{11}C]acyl chloride syntheses using commercially available ^{11}C-modules
M.W. Nader and F. Oberdorfer	681	Syntheses of [*carbonyl*-^{11}C]2-(2-benzoylphenoxy)-*N*-phenylacetamide from [^{11}C]carbon monoxide by the Suzuki and the Stille reactions

P. Brust, H. Rodig, J. Römer, H. Kasch, R. Bergmann, F. Füchtner, D. Zips, M. Baumann, J. Steinbach and B. Johannsen 687 Distribution of 16α-[^{18}F]fluoro-estradiol-3,17β-disulfamate in rats, tumour-bearing mice and piglets

P. Kumar, L.I. Wiebe, M. Asikoglu, M. Tandon and A.J.B. McEwan 697 Microwave-assisted (radio)halogenation of nitroimidazole-based Hypoxia markers

Marianne Patt, Dietlind Sorger, Matthias Scheunemann and Gerhard Stöcklin 705 Adduct of 2-[^{18}F]FDG and 2-nitroimidazole as a putative radiotracer for the detection of hypoxia with PET: synthesis, in vitro- and in vivo-characterization

M. Kassiou, C. Loc'h, F. Dolle, J.L. Musachio, L. Dolci, C. Crouzel, R.F. Dannals and B. Mazière 713 Preparation of a bromine-76 labelled analogue of epibatidine: a potent ligand for nicotinic acetylcholine receptor studies

Piyush Kumar, Leonard I. Wiebe, Rezaul H. Mannan, Zaihui Zhang, Haiyan Xia and Alexander J.B. McEwan 719 [^{99m}Tc]Technetium labelled PnAo-azomycin glucuronides: a novel class of imaging markers of tissue hypoxia

S. Kutlan Ozker, Robert S. Hellman and Arthur Z. Krasnow 729 Preparation of ^{99m}Tc labeled substance P (SP)

Perihan Unak, Huseyin Enginar, F. Zümrüt Biber, Fatma Yurt Lambrecht, Mahmoud A.A. Aslani and Hayal Ozkilic 733 A correlative study between ^{99m}Tc-ESTCPTA and ^{99m}Tc-MIBI in rats

I. Al-Jammaz, B. Al-Otaibi and J.K. Amartey 743 A novel route to radioiodinated [^{123}I]-*N*-succinimidyl-3-iodobenzoate, a reagent for radioiodination of bioactive peptides

Ronald E. Weiner and Mathew L. Thakur 749 Radiolabeled peptides in the diagnosis and therapy of oncological diseases

Events 765

Number 6

Radiochemistry and Radionuclide Applications

Ruy Garcia Marques, Andy Petroianu, Márcia Betânia Nunes de Oliveira, Mário Bernardo-Filho, Edson Mendes Boasquevisque and Margareth Crisóstomo Portela 767 Bacterial clearance after total splenectomy and splenic autotransplantation in rats

Xiaolin Hou, Ulf Jacobsen and Jesper C. Jørgensen 773 Separation of no-carrier-added ^{64}Cu from a proton irradiated ^{64}Ni enriched nickel target

Margaret Tzaphlidou and Vladimir Zaichick 779 Neutron activation analysis of calcium/phosphorus ratio in rib bone of healthy humans

P. Blanco, J.C. Lozano and F. Vera Tomé 785 On the use of ^{225}Ra as yield tracer and Ba(Ra)SO_4 microprecipitation in ^{226}Ra determination by α-spectrometry

Radiation Sources and Applications

S.L. Dong, T.C. Chu, J.S. Lee, G.Y. Lan, T.H. Wu, Y.H. Yeh and J.J. Hwang 791 Estimation of mean-glandular dose from monitoring breast entrance skin air kerma using a high sensitivity metal oxide semiconductor field effect transistor (MOSFET) dosimeter system in mammography

M.S. Dias, J.R. Sebastião and M.F. Koskinas 801 Methodology for monitoring the residual activity in silicon rods irradiated with thermal neutrons

B. Reniers, S. Vynckier and P. Scalliet 805 Dosimetric study of a new palladium seed

Jiawei Sheng, Kohei Kadono and Tetsuo Yazawa 813 Fading behavior of X-ray induced color centers in soda-lime silicate glass

Akintunde Akangbe Okunade 819 Comparison of lead attenuation and lead hardening equivalence of materials used in respect of diagnostic X-ray shielding

Chao-Yuan Huang, Tieh-Chi Chu, Sung-Yen Lin, Jao-Perng Lin and Chang-Yao Hsieh 825 Accuracy of the convolution/superposition dose calculation algorithm at the condition of electron disequilibrium

Technical note

E.H.K. Akaho, S.A. Jonah, B.J.B. Nyarko, S. Osae, B.T. Maakuu, Y. Serfor-Armah and A.W.K. Kyere 831 Simultaneous use of neutron transmission and reflection techniques for the classification of crude oil samples

Synthesis of Labelled Compounds

Judith A. Egan, Richard P. Nugent and Crist N. Filer 837 Tritium labelling and characterization of the cognition enhancing drug tacrine using several precursors

Michael R. McDevitt, Dangshe Ma, Jim Simon, R. Keith Frank and David A. Scheinberg 841 Design and synthesis of ^{225}Ac radioimmunopharmaceuticals

E.A. Nunan, V.N. Cardoso and T. Moraes-Santos 849 Technetium-99m labeling of tityustoxin and venom from the scorpion *Tityus serrulatus*

Technical notes

K. Hamacher and H.H. Coenen 853 Efficient routine production of the ^{18}F-labelled amino acid O-(2-[^{18}F]fluoroethyl)-L-tyrosine

D. Roeda, F. Dollé and C. Crouzel 857 An improvement of [^{11}C]acetate synthesis—non-radioactive contaminants by irradiation-induced species emanating from the [^{11}C]carbon dioxide production target

Radioactivity and Radiation Measurements

Eduardo Galiano Riveros 861 The digital radiographic and computed tomography imaging of two types of explosive devices

Bernhard Lauss 867 CCD saturation in high-background environments

A.L. Gonzalez, H. Li, M. Mitch, N. Tolk and D.M. Duggan 875 Energy response of an imaging plate exposed to standard beta sources

S.L. Dong, T.C. Chu, G.Y. Lan, T.H. Wu, Y.C. Lin and J.S. Lee 883 Characterization of high-sensitivity metal oxide semiconductor field effect transistor dosimeters system and LiF:Mg,Cu,P thermoluminescence dosimeters for use in diagnostic radiology

M. Jurado Vargas, A. Fernández Timón, N. Cornejo Díaz and D. Pérez Sánchez 893 Monte Carlo simulation of the self-absorption corrections for natural samples in gamma-ray spectrometry

Bhaskar Mukherjee 899 A real-time positron monitor for the estimation of stack effluent releases from PET medical cyclotron facilities

Dawid de Villiers, Meiring Nortier and Werner Richter 907 Experimental and theoretical excitation functions for ^{nat}Br(p, x) reactions

Technical note

M. Hasan, D. Bódizs and Sz. Czifrus 915 A simplified technique to determine the self-absorption correction for sediment samples

Nuclear Geophysics

B. Zmazek, F. Italiano, M. Živčić, J. Vaupotič, I. Kobal and G. Martinelli 919 Geochemical monitoring of thermal waters in Slovenia: relationships to seismic activity

D.M. Bonotto and L. Caprioglio	931	Radon in groundwaters from Guarany aquifer, South America: environmental and exploration implications
K.N. Yu and L.Y.L. Lee	941	Measurements of atmospheric ^{7}Be properties using high-efficiency gamma spectroscopy
Events	947	
Contents of volume 57	III	
Author index to volume 56	XIII	
Subject index to volume 56	XV	